

## **AMENDMENTS TO THE DRAWINGS**

The attached sheets of drawings include changes to Figures 1 and 3-11 and new Figures 13-15. Attached hereto are 10 replacement sheets and 3 new sheets depicting the box, collapsible box, and net recited in claim 8. The changes are as follows:

In Figures 1 and 3-11, the cross-sectional views have been hatched.

Further, in Figure 1, the upper view has been labeled “Figure 1A” and the lower view has been labeled “Figure 1B”.

Additionally, Figure 5 has been amended to remove the reference character “10”.

Figures 13-15 are new and depict the box, collapsible box, and net, respectively, recited in claim 8.

Attachments: Replacement Sheets (10)

New Sheets (3)

## **REMARKS**

Claims 1-11 constitute the pending claims in the present application. Claim 3 was withdrawn from consideration. Claims 1, 2, 6-9 and 11 have been amended.

Amendments presented in this reply are made to expedite prosecution of the claims in the present application and should not be viewed as acquiescence to the Examiner's positions. Applicant reserves the right to pursue claims of similar or differing scope in future applications.

No new subject matter has been added, and the amended claims should not necessitate an additional search. Support for the amended claims can be found in the application and claims as originally filed. For example, support for the amendments to the claims regarding "an internal spring activation element" and "an internal release activation element" can be found in claims 1 and 9 as originally filed.

Applicant notes with appreciation the Examiner's conclusion that claim 6 would be allowable if rewritten in independent form and to overcome the rejections under 35 U.S.C. §112, second paragraph.

The issues raised by the Examiner in the Office Action are addressed below in the order they appear in the prior Action.

### **Interview**

Applicant and Applicant's agent, Kathleen Ehrhard, thank the Examiner for the personal (Applicant) and telephonic (Applicant's agent) interview granted on December 6, 2005. Applicant brought a model of a low-force release mechanism of the subject application and demonstrated how it is operated.

Applicant's agent discussed with the Examiner amending the specification to include antecedent basis for the terms listed in the Office Action. Applicant has

accordingly amended the specification to provide antecedent basis that coincides and clarifies the components in the claims with those in the specification.

Applicant's agent also discussed with the Examiner amending the recitation of the term "that pushes" in claim 6, line 2 and agreed to amend claim 6, line 2 to recite alternative language such as "able to push" to clarify that the hanger does not push the spring pin down all the time. Applicant has amended claim 6 accordingly.

Applicant's agent and Applicant discussed with the Examiner differences between De Pew's device (U.S. Patent No. 3,065,011) and the subject invention, such as the functional differences between the two devices. The Examiner maintained that though De Pew's device operates differently, the pending claims do not recite any structural differences.

#### The Drawings Comply with 37 CFR 1.83 and 1.84

The Examiner objects to the drawings as failing to comply with 37 CFR 1.84(p)(5) because reference character "10" shown in Figure 5 is not mentioned in the description. Applicant has amended Figure 5 to remove the reference character "10".

The Examiner objects to the drawings as failing to comply with 37 CFR 1.84(h)(4) and 1.84(i) because Figure 1 has two views and the cross-sectional views of Figures 1, 3-11 are not hatched. Applicant has amended Figure 1 such that the first view is labeled "Figure 1A" and the second view is labeled "Figure 1B". Additionally, Applicant has amended the cross-sectional views of Figures 1A-1B and 3-11 such that they are hatched.

The Examiner objects to the drawings as failing to comply with 37 CFR 1.83(a) because the box, the collapsible box, and the net recited in claim 8 must be shown. Applicant has attached three new sheets (Figures 13-15), which depict the box, the collapsible box, and the net recited in claim 8. In addition, Applicant has amended the specification to include new Figures 13-15 in the Brief Description of the Drawings.

Applicant believes the foregoing amendments obviate the Examiner's rejections of the drawings under 37 CFR 1.83 and 1.84. Accordingly, reconsideration and withdrawal of the objections to the drawings is respectfully requested.

#### Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. The Examiner has requested that the limitations "attachments" in claims 1, 7, 9, and 11 and "by which a container is attached to the main structure and the trap" in claims 1, 7, 9, and 11, "the release pin, a lift spring, and the one or more ball bearings or slugs interact with the geometry of the trap" in claim 7, and "the release pin, a trap spring, and the one or more ball bearings or slugs interact with the geometry of the trap" in claim 11, be described in the specification. Applicant does not feel this is necessary as these elements are supported in the specification as originally filed. In the interest of expediting prosecution, Applicant is amending the specification as requested by the Examiner. No new matter is introduced.

Applicant believes the amendments to the specification overcome these objections. Accordingly, reconsideration and withdrawal of the objections to the specification is respectfully requested.

#### Claims

Applicant thanks the Examiner for pointing out informalities in the claims. Applicant has accordingly amended the claims as detailed below.

Claim 2 has been amended to recite "the" after "at" in line 2.

Claims 7 and 11 have been amended to recite "interact" in line 9.

Claim 8 has been amended as requested by the Examiner to recite that the container is selected from “the group consisting of: a bag, a box, a collapsible box, and a net.” Applicant submits that the scope of the claim is not narrowed by this amendment.

Accordingly, reconsideration and withdrawal of the objections to the claims is respectfully requested.

The Claims Comply with 35 U.S.C. §112

Rejection of Claim 4 under 35 U.S.C. §112, first paragraph

Claim 4 is rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Applicant traverses this rejection.

The specification discloses on page 8, lines 9-10 that “[g]enerally, the coefficient of static friction for dry surfaces (metal on metal) is between 0.15 – 0.60.” The specification goes on to state in lines 11-12 that “the coefficient of static friction for rollers may be significantly lower which results in a lower force required to activate the mechanism”. As such, the specification provides specific guidance for what may constitute a low coefficient of static friction. In so doing, the specification teaches that a coefficient of static friction less than 0.15 will result in a lower force necessary to activate the mechanism. That the example specifically states that rollers may be significantly lower is by no means limiting. Furthermore, claim 4 as originally filed recited “low frictional ball bearings”. Given that the typical coefficient of static friction for dry surfaces is provided in the specification as well as the fact that a lower coefficient of static friction results in a lower force required to activate the mechanism, the specification provides ample guidance to the skilled artisan that low frictional ball bearings can have a coefficient of static friction that is less than 0.15.

Accordingly, reconsideration and withdrawal of the §112 rejection is respectfully requested.

Rejection of Claim 6 under 35 U.S.C. §112, second paragraph

Claim 6 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner contends that the term “pushes” makes the claim a “living claim” and that it is unclear how the hanger 12 is able to push the internal spring pin 2 down. Applicant has amended claim 6 to clarify that the hanger does not push the spring pin down all the time but that it is “able to push” the internal spring pin down such that it locks the spring pin “in a down position”.

Accordingly, reconsideration and withdrawal of the §112 rejection is respectfully requested.

The Claims Comply with 35 U.S.C. §102

Rejection of Claims under 35 U.S.C. §102(b) (De Pew U.S. Patent No. 3,065,011)

Claims 1, 2, 5, 7, 8, 10, and 11 are rejected under 35 U.S.C. §102(b) as being unpatentable over De Pew (U.S. Patent No. 3,065,011). Applicant traverses this rejection to the extent it is maintained over the claims as amended.

Claim 1 (and by dependency claims 2, 5, 8, and 10) recites a low-force release mechanism comprising: a main structure; a trap; an internal spring activation element, wherein the internal spring activation element comprises *a moveable* internal spring pin, an internal spring, and a release pin to eliminate ordinal setup requirement; at least one trigger; and attachments by which a container is attached to said main structure and said trap, wherein the release pin *is configured to be moveable* between one or more ball bearings or slugs in an *internal* geometry of the trap, *such that the position of said trap is locked and held*; a load force is distributed away from the trigger to permit application of a low force for release; and an internal release activation element comprising the release pin and the one or more ball bearings or slugs interact with the geometry of the trap, whereby the one or more ball bearings or slugs retract upon removal of the release pin such that the application of the low force on the trigger causes the internal spring pin, the internal spring, and the release pin to move a position of the container. Claim 7 further recites a lift spring, and claim 11 further recites a trap spring.

De Pew discloses a device with two sets of ball bearings 21 and 36 (Figure 1). In neither instance, however, is the release pin 20 moveable between the ball bearings such that the position of the trap is locked and held, as recited in the pending claims. Contrary to the ball bearings recited in the pending claims, the ball bearings 36 *retract* in the locking position (see e.g., column 2, lines 46-50). And unlike the ball bearings recited in the pending claims, the ball bearings 21 and the release pin do not interact in an internal geometry of the trap to lock and hold a position of the trap. Furthermore, what the Examiner characterizes as an internal spring pin 41 is actually two rivets, which fix a ring 40 to the lock member 38 (see e.g., column 2, lines 50-54). Thus, contrary to the Examiner's assertions, even if the rivets 41 were akin to the internal spring pin recited in the pending claims, the rivets 41 are *fixed* and consequently are unable to move a position of the container A8 in conjunction with the internal spring 46 and release pin 20, which is in contrast to the internal spring pin recited in the pending claims.

Additionally, regarding claim 5, Applicant points out that what the Examiner characterizes as a hanger 13 is not a hanger but rather "a flange 13 that may be attached to a base by suitable means such as by welding or bolting" (column 2, lines 2-4).

Regarding claim 8, De Pew does not disclose the use of containers such as bags, boxes, collapsible boxes, or nets.

There is no load distribution in the device disclosed by De Pew. Thus, contrary to the Examiner's contention regarding claim 10, the load force is not distributed to the main structure 12 and the trap 11.

Accordingly, De Pew does not teach or suggest all the elements of the pending claims. For the foregoing reasons, Applicant believes that the reference cited by the Examiner does not anticipate the pending claims. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

The Claims Comply with 35 U.S.C. §103

Rejection of Claims under 35 U.S.C. §103(a) (De Pew, U.S. Patent No. 3,065,011 in view of Hamblin, U.S. Patent No. 4,887,919)

Claim 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over De Pew (U.S. Patent No. 3,065,011) in view of Hamblin (U.S. Patent No. 4,887,919). Applicant traverses this rejection to the extent it is maintained over the claims as amended.

The Examiner's attention is drawn to MPEP § 706.02(j), which sets forth that a teaching or suggestion provided by the prior art reference (or references when combined) of all the claimed limitations is necessary to establish a *prima facie* case of obviousness. The following comments address this requirement of a rejection under 35 U.S.C. § 103(a).

De Pew is discussed above. Hamblin discloses only that a typical coefficient of friction of lubricated steel is 0.14μ. Hamblin does not describe the use of low frictional ball bearings as recited in claim 4.

Hamblin does not overcome the deficiencies of De Pew discussed above. Accordingly, neither De Pew nor Hamblin, either alone or in combination, teach or suggest all the elements of the pending claims.

For the foregoing reasons, Applicant believes that the references cited by the Examiner do not render the claimed subject matter *prima facie* obvious under 35 U.S.C. § 103(a). Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Rejection of Claims under 35 U.S.C. §103(a) (De Pew, U.S. Patent No. 3,065,011 in view of Huff, U.S. Patent No. 1,027,481)

Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over De Pew (U.S. Patent No. 3,065,011) in view of Huff (U.S. Patent No. 1,027,481). Applicant traverses this rejection to the extent it is maintained over the claims as amended.



De Pew is discussed above. Huff discloses the attachment of a *cable* from a part of the releasing means of a hook (column 2, lines 83-89). Huff does not teach or suggest the attachment of a string to a low-force release mechanism as recited in claim 9.

Huff does not overcome the deficiencies of De Pew discussed above. Accordingly, neither De Pew nor Huff, either alone or in combination, teach or suggest all the elements of the pending claims.

For the foregoing reasons, Applicant believes that the references cited by the Examiner do not render the claimed subject matter *prima facie* obvious under 35 U.S.C § 103(a). Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

#### Allowable Subject Matter

The Examiner indicated that claim 6 would be allowable if rewritten to overcome the rejections under 35 U.S.C. §112, second paragraph and to include all the limitations of the base claim. Applicant has accordingly amended claim 6 to overcome the §112 rejections and has rewritten claim 6 in independent form. Accordingly, Applicant believes the amendments obviate the Examiner's objections.

## CONCLUSION

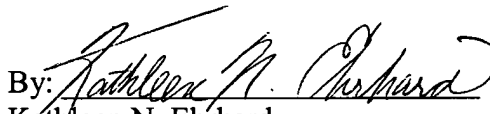
In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the pending rejections. Applicant believes that the pending claims are in condition for allowance, and early and favorable reconsideration is respectfully solicited.

If there are any fees due in connection with the filing of this Response, please charge the fees to our **Deposit Account No. 18-1945** under Order No. WMFR-P01-001.

Respectfully submitted,

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